

introduction of copious footnotes which deal with sources, historical information, difficult demonstrations, interesting generalizations, and conceptions too advanced for the text proper. Thus, the discussion of the theory of assemblages is supplemented in the footnotes by reference to transfinite assemblages; and the ordinary presentation of the integral is supplemented by the introduction of upper and lower integrals.

The comprehensive, suggestive, critical footnotes greatly enhance the value of the work.

The volumes under review are especially valuable for those who wish a thorough treatment of the fundamental conceptions, and an introduction to the latest ideas, for the author has not only given a sketch of these phases of the subject, but has also indicated many sources.

GEO. N. BAUER.

*Lectures de Mécanique: La mécanique enseignée par les Auteurs originaux.* Par E. JOUGUET. Deuxième partie: *L'Organisation de la Mécanique.* Paris, Gauthier-Villars, 1909. 284 pp.

MANY of the mathematicians who teach the elements of mechanics may have more or less serious *arrière pensées* relative to the way in which they have presented the fundamental concepts to their students, and they may form many a good resolution as to the severe logical thinking they will expend upon the subject to the end that the next time they teach it the presentation may gain much in completeness and consistency. To all such Jouguet's Lectures are a godsend,—not that all the difficulties of the doubting ones will be relieved by the perusal of the work, but that the doubts and perplexities of the great creators of mechanics, and the way they settled them or at least thrust them aside, are here detailed. For the plan of the work, as the subtitle indicates, is to teach (the foundations of) mechanics by (large extracts from) the original authors. We may say that Jouguet selects his quotations well and makes each one sufficiently long to be intelligible of itself; but one must add that his own careful critical comments are very helpful toward the fullest interpretation both of the material cited and of the subject itself.

The work consists of three parts: the first, which is not at hand, called *La naissance de la mécanique*; the second, which is under review, entitled *L'organisation de la mécanique*; the